Perception of Race and Utilization of Healthcare

Honors Research Thesis

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Abstract

While several academic disciplines have begun to realize that individuals' views of their racial makeup and social situation can have an affect on many of their actions, little work has been done to understand how characteristics of one's racial group identity can specifically affect healthcare utilization decisions and patterns. Using data from the 2004 Behavioral Risk Factor Surveillance System (BRFSS) from across five states (n=25,750) as well as an online survey designed to better understand how perception of race can impact healthcare institution choices (n=300), this study explored how frequency of thoughts of race, racial group centrality, knowledge of past and current health disparities, trust in the healthcare system, and previous health-related discriminatory experiences may impact decisions to utilize healthcare. A racially stratified analysis of data extracted from the 2004 BRFSS data set, after adjusting for variables such as income, education level, and health care coverage, showed that the number of doctor visits was not impacted by frequency of thoughts of race in Whites, showed that a borderline significant relationship existed between the variables for Hispanic individuals, and showed that a significant relationship existed between the variables for Black individuals. Additionally, a statistically significant relationship was specifically discovered in Blacks with the poorest self-rated mental and general health status. A racially stratified analysis of the first experimental treatment within the online survey indicated that Blacks were more likely to have a preference for a hospital advertisement featuring Black healthcare workers, which was moderated by black centrality, trust in the healthcare system, belief that the Tuskegee Experiment could happen again, and belief that racial health disparities currently exist. No such statistically significant relationship was found for Whites. In

analysis of the second experimental treatment in the online survey, no relationship was found for either race with regard to physician preference by racialized name. General trends from the survey indicate that both Blacks and Whites were equally as likely to have had a discriminatory healthcare experience and to have a similar level of trust in the healthcare system; however, Blacks were much more likely that Whites to believe that racial health disparities exist, to be knowledgeable about current health disparities, to have knowledge of the Tuskegee Experiment, and to believe that something like the Tuskegee Experiment could happen again. These results suggest that racial identity and perception of past and present mistreatment and disparities are important components in the health decision-making process for Black Americans but not necessarily for White Americans. This also suggests that more attention should be given to exploring how one's identification with his or her race may influence the care he or she chooses to seek in the hopes of identifying policy and programming options that may equalize health access and outcomes across races.

Introduction

Health disparities research has long been focused on identifying differences in physical and mental health outcomes between different groups of people, and there is no shortage of gaps that exist between a myriad of cross-sections of society. For example, one could look to the famous Whitehall studies to see how employment grade can affect death rates, at the host of literature characterizing the "Hispanic Paradox" to understand how immigration status and strength of social networks may confer special health protective effects to certain Hispanic groups, and to innovative analysis of the curvilinear relationship that income seems to have with mortality rates, especially for males (Council of Civil Service Unions/Cabinet Office, 2004; Franzini, Ribble, & Keddie, 2001; Backlund, Sorlie, & Johnson, 1996). A search of the literature provides several explanations for these inequities. Many of them seem to be focused on social determinants of health and include unequal structural and policy factors, such as city plans that leave poorer minority neighborhoods with fewer supermarkets, as well as population subsets' differing ability to use resources purposefully, which has been explained by Bruce Link and colleagues through the Fundamental Cause Theory (Moore & Roux, 2006; Phelan et al., 2004). However, some explanations are also rooted in the biological sciences, such as the understanding that racial discrimination may have detrimental effects on the blood pressure of young Black adults, an insight that was gleaned after an analysis of the Coronary Artery Risk Develop in Young Adults study (Krieger & Sidney, 1996). Additional studies have explored the relationship that genetics have on disease and outcome prevalence, with a common example being an increased proportion of individuals who live in plasmodia-dense areas being

heterozygotes for the sickle gene, which confers a unique level of protection at the genetic level against the malaria-causing parasite (Luzzatto, 2012).

However, while studies have analyzed the issue of health disparities from multiple angles, and while postulations for these observed inequities are being put forward, not nearly enough is being done to actually solve the disparities that are so ubiquitously characterized. One needs to look no further than a review article of the health disparities literature to see the glacial pace at which society has moved on translating research and knowledge into effective programs and policies. For example, Adler and Stewart (2010) state that finally, after five eras of health disparities research,

> "…advances foreshadow a sixth era of work on health disparities; one which translates evidence into policy and develops interventions and evaluation protocols based on the sophisticated understanding allowed by the aggregate of knowledge accrued across eras of health disparities research" (p. 18)

Interested in academic work that can be translated to policy or programs, the ultimate purpose of this thesis is to better understand how one specific subset of disparities, that is, those that are racial in nature, may be lessened. To do this, this paper will address how perception of one's own race and one's situation with relation to the healthcare system may affect utilization of healthcare by members of different racial groups. The ultimate purpose is not only to characterize psychological and sociological phenomenon, but also to inform practical implementations. Thus, with this thesis I hope to accomplish several tasks, which are as follows:

1) To understand the effects that one's race may have on his or her decision to utilize healthcare
2) To understand which variables moderate how one's perception of his or her race affect his or her decision to utilize specific healthcare resources
3) To suggest ways in which knowledge of these two understandings may be translated to practical policy recommendations

Background and Hypothesis

In order to elucidate the effects that race can have on the decision to utilize the healthcare system, it is important to understand several background points. For example, it is important to have a basic understanding of the disparities in health outcomes and access that exist across races, for if there are no disparities, then searching for policies and programs would simply be a waste of resources.

It is also necessary to explore how Blacks view and interact with the political system in the United States and how this compares and contrasts to available literature regarding Black views of the healthcare system. This is because the political system is not unlike the healthcare system. Both institutions are prominent parts of American society, are hugely important in the economic sector, and are notably White. Speaking to this last point, with regards to the political system, there have been a total of four Black governors (two of which were not actually elected) and eight Senators in the history of the United States (Bigg, 2008; Breaking new ground – African American senators, n.d). With regard the healthcare system, racial diversity is equally limited, with only 3.5% of doctors describing themselves as Black and only 16.8% of Nurses describing themselves

as “Non-White or Hispanic” (American Medical Assosciation, 2010; Health Resources and Services Administration, 2010). These are some of the most visible members of the political and healthcare system respectively, and thus it seems fair to classify these institutions as at least outwardly White, which explains why a social identity approach to both political and health disparities, specifically parsing by racial group, is appropriate.

With these structures being, specific services provided aside, seemingly related, an understanding of one may help lead to an understanding of the other, and from understanding can come policy or program recommendations. Black politics, including the views that Blacks have of the American political system, have been relatively well studied, and thus a search of that literature may help to provide a novel or under-studied perspective from which to study and alleviate racial health disparities.

Racial Disparities

Racial disparities can be found in the data produced by many areas of healthcare outcomes and access. Table 1 (Appendix B) provides a brief summary of several general health outcome measures. However, disparities are not only represented in general outcome metrics; rather, they are perfectly clear when examining specific conditions and diseases as well. For example, the ratio of age-adjusted death rates for Blacks and Whites for cancer and heart disease are 1.3 (which is up from approximately 1.0 in 1950) with the difference in age-adjusted death rates for Blacks and Whites being 51.3 and 71.4 deaths per 100,000 population, respectively (Williams & Jackson, 2005).

In addition to astonishing disparities in outcomes, unequal access (possibly leading to the aforementioned outcome disparities) also plagues racial minorities. For

example, table 2 (Appendix B) summarizes the disparity in recent insurance status percentages across races, highlighting the lack of coverage for minorities.

Of course, some may argue that with the passage of the Affordable Care Act, these disparities in insurance coverage will cease to exist. In fact, as much as 23-42 percent of disparity in access to care may be eliminated with the equalization of healthcare insurance in the United States (Lillie-Blanton & Hoffman, 2005). However, that still leaves roughly two-thirds of the access disparity unaccounted for, which implies that there are other variables that play a substantial role in access inequities.

In order to demonstrate the inability of insurance extension alone to completely alleviate access disparities, Barak Richman (2007) analyzed health claims made by the more than 20,000 employees of Duke University and Duke University Health System from 2001-2004. Because this university system provides its employees with health insurance, and because there is little variation in the benefits between the plans to which the majority of employees subscribe, an analysis of health claims and spending, stratified by race and socioeconomic status, can illustrate the shortcomings of equalized insurance alone. He found that even with access controlled for, racial minorities were less likely to use care; race contributed to a person's likelihood of using mental health care, amount of spending on mental health claims, utilization of drug benefits, and the amount of spending on drug benefits (Richman, 2007). Clearly, blanket policies that simply provide relatively equal access to insurance coverage do not completely address the issue of access disparities.

It has been argued that decreasing disparities in the United States between Whites and Blacks enough to equalize mortality rates would actually save more lives than do

medical technologies developed each year (Woolf et al., 2004). Whether the cause of these disparities is systemic (such as economic conditions or coverage differentials between public and private insurance plans) or due to biological manifestations of stigma and prejudice, racial disparities cost money and lives, and they must be addressed (National Urban League, 2012; Stuber, Meyer, & Link, 2008).

Group Identity and Black Politics

There are many intricacies to theories concerning group identity, and Black politics may be approached in numerous ways. However, focusing specifically on understanding the concept and importance of the racial group to Blacks in the context of the political system and general outlooks in the United States is especially critical to understanding the methods and results to be presented in this work.

Certain racial groups have especially strong senses of identity, and these racial identities themselves have been increasingly as multidimensional constructs that include physical, psychological and cultural elements of life (McClain et al., 2009; Demo & Hughes, 1990).

As long as different racial groups have been noted, realizing that racial group identity will contribute with varying magnitudes to one's whole identity, there have been intergroup conflicts. In the United States, the fight between Black and White, both from an individual and systemic vantage point, has continued for hundreds of years. One popular theory that has arisen to describe how conflicts may arise when individuals form group associations is Social Identity Theory. This theory suggests

"that strong ingroup sympathies often give rise to equally strong outgroup

> antipathies, and that, under the right circumstance…these intergroup animosities explode into intergroup [conflict]…[however,] the prospects for intergroup peace [may] be enhanced by forces or factors…that generate cross-cutting cleavages that weaken, moderate, and depoliticize group attachments." (Gibson, 2006, p.666)

However, others have explained that groups are not necessarily destined to almost-automatic tension (Turner, 1999). Thus, the issue of overcoming group differences, or conflicts with regards to differential outcomes and access, should not be viewed as destined to repeat. Of course, even if the only answer to racial disparities was to eliminate groups altogether, such a solution is clearly not practical in today's social and political climate.

In addition to Social Identity Theory, additional relevant details are present in Self-Categorization Theory, which suggests that the strength of the previously described social identity is context-dependent, with strength of identity being dependent upon particular social comparison in a given context (Oakes, Haslam, & Turner, 1994). For example, a Black individual constantly comparing him or herself to a White or Hispanic individual might be more likely to report feeling a larger proportion of his or her own identity being race-based than a Black individual living without such exposure would be. For this study, the idea that one self-categorizes themselves based on a variety of variables, moderated by social context, is important, as it suggests that altering social context may help to limit intergroup tensions by limiting visibility of conflicting groups in society.

With this brief explanation of the different components of group identities and the

conflicts that can arise from them, the practical worth of these theories can be better understood by exploring their impact in a political context. In describing the issues that African Americans can face in the American political system, Barker, Jones, and Tate (1999) explain that "African Americans, like other disadvantaged groups, have always viewed political participation as a means through which full equality in the social, economic, and cultural life of the country could be obtained." (p.32) To highlight this general disadvantage, Barker, Jones, and Tate show that throughout the 1980s and 1990s, over 25% of Blacks were in poverty and that the median family income in the 1994 for Blacks was at most 86% of what it was for Whites (Barker, Jones, and Tate, 1999). In addition to these tangible manifestations of systemic disadvantage that seem to have historically, from the time of slavery to now, characterized the Black condition in America, other scholars have postulated that certain African American mentalities, undoubtedly formed by self-analysis of the reality of their situation, also may burden Blacks. In a particularly controversial example, John McWhorter has written that

> "Whatever the wisdom or folly of…anti-integrationist trend, for such people, Black well-being would be less a matter of integration than basics like financial success and psychological well-being. Crucially, however, the main thing today keeping even these goals elusive for so many Black Americans is the very midst with which history has burdened the black community. The ideological seas of troubles plaguing Black America and keeping Black Americans eternally America's case apart regardless of class expresses itself in three manifestations…the Cult of Victimology, under which it has become a keystone of cultural blackness to treat victimhood not as a problem to be solved but as an

> identity to be nurtured…Separatism, a natural outgrowth of the Victimology, which encourages Black Americans to conceive of black people as an unofficial sovereign entity, within which the rules other Americans are expected to follow are suspended out of a belief that [their] victimhood renders [them] morally exempt from them…[and] a strong tendency toward anti-intellectualism at all levels of the Black community." (2001, p. xi-xii)

In this analysis, it is argued that Blacks own mentality and practices act as a negative feedback loop to more disadvantage. Clearly, the position of Blacks in American society is due to a complex set of internal psychological phenomena (although not necessarily the three manifestations mentioned above) as well as institutionalized discriminatory practices, and this shared reality is a strong foundation for acting as a coherent racial ingroup.

The aforementioned building blocks of a strong racial identity as well as the disadvantage and discrimination themselves have culminated in several outcomes for Blacks with regard to the political system that, in theory, offers so much hope to be a vehicle for change. Historically, Black political participation rates in both presidential and congressional races are low (U.S. Census Bureau, 1964-1994). Of course, this trend is clearly also due in part to a legal system and a society full of actors designed to keep Blacks from accessing the political system equally (Ochs, 2006). However, beyond just lower participation rates, Blacks also report having especially low trust in the government and a low sense of efficacy (Abramson 1972, 1983; Rodgers 1974). This observation is sometimes explained using the Political Reality Model, which purports that Blacks as a group trust the government less than do Whites because of the reality of their group

situation. That is, because Whites in government have treated Blacks (as a group) poorly (as exemplified by general economic and social status), Blacks are less likely to trust the White government but may be more likely to trust the institutions once one of their own has obtained power (Ulbig, 2005). This theory has been tested and supported in experiments that have shown Blacks to be more likely to trust the government (at least when narrowing the frame of reference to the local government) and to participate in the political system when Blacks are in power (Howell & Fagan, 1988; Rocha et al., 2010).

Many of these same phenomena and their resulting outcomes can be observed with regard to health as well, adding credence to the idea that the translational use of lessons learned from Black Politics and its relation to social identity theories may help to teach health professionals how to combat disparity problems within the field. Somewhat analogous to described economic and social outcomes, racial disparities clearly exist in the United States as well (see "Racial Disparities" above). Furthermore, in addition to these manifested disadvantages, there is a similar lack of Black group trust, and even a fear, in specific components of the healthcare system. This seems to stems at least partially from the greater awareness that African Americans have of the reality of their group history of being discriminated against in the healthcare system (Boulware et al., 2003). This may contribute to unequal usage of the healthcare system that seems analogous to the historic lack of participation in the political system. One example that serves to illustrate this point is that Blacks seem to utilize certain preventative procedures, specifically colorectal cancer screenings, less the more frequently they think of their race (Crawford, Jones, & Richardson, 2010). However, serving as a parallel to the previously described political science experiments, having a physician who is of the

same race increases patient's satisfaction with care (LaVeist & Nuru-Jeter, 2002). Departing from a discussion of race specifically to speak more generally, research has even shown that this type of social identity approach does have a place in the healthcare world and that it may be used as a framework for overcoming divisions wthin the operation of healthcare itself (Kreindler et al., 2012).

In summary, considering the seemingly similar prominence, importance, and Whiteness of both the political and healthcare system, an understanding of one may help lead to an understanding of the other. Researchers have long applied a theoretical framework of group characterization and conflict to the very practical political system. In doing so, the disparities that exist at the institutional level seem to be, at least in part, explained. Blacks as whole seem to be a group both drawn together and characterized by disadvantage in social outcomes and access to a tool, the political system, which may allow them to change this reality. Furthermore, they seem to have a mentality (derived from numerous social and cultural factors) that is identifiably different from that of other races, and this unique mentality may manifest itself as strong group identity and even as a cause of intergroup conflict. This discriminatory reality has led Blacks to have poor political participation rates and low trust in the government. However, altering this reality by altering social context (such as increasing the number of Blacks in power) seems to have the ability to impact negative outcome measures.

This review also supports the assertion that the application of the same theoretical explanation of group characterization and conflict to the similarly practical healthcare system can yield related explanations for the disparities that exist at the institutional level. Blacks as a whole are a group characterized by poor health outcomes and lacking the

ability to access the system at the same rate as other groups. Furthermore, their mentality with regard to the healthcare system (derived from numerous social and historical factors) is identifiably different from that of races that have clearly had different social and historical experiences, and this fact may also lead to intergroup conflict at the institutional level. This reality has often led Blacks to have poorer utilization rates of the "White" healthcare institution and to have lower trust in components of the system generally.

Similar to the caveat discussed with regard to improving Black participation and trust in the political system, limited research does suggest that altering social context by altering the makeup of the healthcare system may have the ability to impact negative health outcome measures. However, unlike the more robust political science work, public health literature has a lot of room to grow on how social context, group identity, and the decision to trust, utilize, and benefit from healthcare merge. Even more limited is how to alleviate disparities by moderating this interaction using practical solutions. Thus, a study, inspired in part by how the previously discussed theories and subfield may apply to racial disparities in the health system, was conducted to more fully characterize the connection between the aforementioned variables. Results are discussed and applied to general policy and program initiatives that may be considered in the alleviation of racial health disparities.

Methodology

There were two analyses conducted for this study. First, a general test was implemented to explore whether differences within racial subgroups may contribute to

healthcare utilization behavior. Behavioral Risk Factor Surveillance System (BRFSS) data from five states (n=25,750), all of which conducted both the Smoking Cessation and Reactions to Race optional modules, were analyzed for connections between frequency of thoughts of race, self-reported mental health, self-reported physical health, and number of doctor visits. The BRFSS, which "is a state-based system of health surveys that generate information about health risk behaviors, clinical preventive practices, and health care access and use primarily related to chronic diseases and injury," was chosen as a data source for several reasons, but most notably that it included variables that allowed for the correlation between personal reactions to ones' own race and other health and access status indicators to be drawn (Centers for Disease Control and Prevention, 2004).

After analysis of these data, further study of how internal perceptions by Black and White racial groups impact healthcare utilization was conducted. These racial groups were chosen specifically for several reasons. Firstly, the research question had to be limited to a manageable scope. Furthermore, because outcomes of non-Black racial groups are often similar to that of Whites (as exemplified by the earlier example of the "Hispanic Paradox"), Black racial identity may have a particularly strong effect on healthcare utilization and was therefore chosen for additional analysis.

In order to conduct this deeper analysis, a survey was created and distributed to a paid panel by Qualtrics (see Appendix A). Instructions to Qualtrics for populating the panel of participants were to find "a random sample of Black (n=225) and White (n=75) adults (over the age of 18) with an assortment of sexes, education levels, and incomes."

The survey included two experimental treatments with participants being randomly assigned to one of two scenarios for each treatment. The first treatment asked

respondents to choose a favorite between two hospital ads. Each scenario included a control ad featuring an MRI machine and text reading "Let Our Technology Work for You!" as well as a short description of some of the highlights of the hospital. The second ad in each scenario included the same short hospital description across conditions, which was created to be similar to the control description, and included a picture of a male and a female healthcare workers and the text "Let Our Staff Work For You!" However, in one scenario the healthcare workers were White while in the other they were Black.

In the second treatment, respondents were asked to imagine that they were suffering from an ailment and then to choose one of two doctors, based upon name and brief resume, which they would prefer to see. Each scenario included a control doctor, "Connor Lavins," and a short resume. The second doctor in each scenario included the same short resume across conditions, which was created to be similar to the control description, but the names were racialized to be stereotypically White and Black in each respective scenario.

In addition to the two treatments, each survey asked questions designed to measure trust in the healthcare system, strength of black centrality (for Black respondents only), historical beliefs about the Tuskegee Syphilis Study, previous discriminatory experiences within the healthcare system, and knowledge of current health disparities. Questions to measure trust in the healthcare system came from the Medical Mistrust Index 2.1 while the questions designed to measure the strength of black centrality were taken from the Multidimensional inventory of Black Identity (Casagrande et al., 2007; Sellers et al., 1997).

Results

BRFSS Analysis

After selecting variables that were present only from states that decided to include both the Reactions to Race and Smoking Cessation optional modules, it was determined that data from Arkansas, Colorado, Delaware, South Carolina, and Wisconsin would be used for further analysis. Information about the data used can be found in Table 3 and 4 (Appendix B).

Multivariable regression analyses were performed to better understand the connection between frequency of thoughts of race and utilization of care, which was measured by number of visits to the doctors in the past twelve months. Results indicated that the number of doctors visits for Whites was not significantly correlated with frequency of thoughts of race, was borderline significantly correlated with Hispanics' frequency of thoughts of race, and was significantly correlated with Blacks' frequency of thoughts of race (both correlations were in the negative direction). The tables 5.1 and 5.2 (Appendix B) display the results of the initial regressions. These results led to further analysis of how frequency of thoughts of race may influence utilization of care in individuals with different mental and general health statuses, where it was determined that again Whites showed no discernable correlation between frequency of thoughts of race and number of doctor visits. Both Blacks and Hispanics showed significant negative correlations at differing levels of self-reported general and mental health. Hispanics who identified as having 0 days of poor mental health in the past month showed the only significant correlation within the intra-race stratification, while Blacks reporting between 8 and 31 days of poor mental health showed the only significant correlation within the

intra-race stratification. When looking at general health status, only Hispanics who good/fair self-rated general health status showed a significant correlation within the intra-race stratification, while Blacks reporting the poorest self-rated general health status showed the only significant correlation within the intra-race stratification. These results are shown in tables 6 and 7 (Appendix B).

Qualtrics Survey

The strength and significance of the trend observed in Blacks and the utter lack of a trend in Whites led to additional analysis focusing specifically on these two groups. In the first experimental treatment, a comparison of the means across scenarios found that there was a statistical difference in choice of hospital advertisement, and racial stratification indivated that the favoritism showed for the hospital advertisement featuring Black healthcare professionals was being driven by Black respondents. A regression analysis controlling for income, education, region of the country, and sex produced similar results to the mean comparison, indicated that the randomization condition worked as designed and that respondents were randomly distributed between the two conditions. These general results concerning the first treatment are presented in table 8, 9, and 9.1 (Appendix B).

In addition to general trends, possibly moderating variables were sought through additional analysis. It was determined that strength of black centrality, knowledge of the Tuskegee Experiment, belief that racial health disparities exist, and trust in the healthcare system all moderated Black respondents' choice of the advertisement featuring Black healthcare professionals. There was no statistically significant correlation observed

between any variabels and White respondents' choice of advertisement. Additionally, personal experiences with discrimination in the healthcare system and knowledge of current health disparities were explored, but statistically significant trends were not found for either Blacks or Whites. These results are presented in tables 11, 12, 13, and 14 (Appendix B).

Correlations across scenarios in the second treatment were also studied for general trends as well as possible moderating variables. However, no statistically significant trends were observed for either race. These general trends are presented in table 15 (Appendix B). Furthermore, no possible moderating variables were found to have any statistically significant relationship to respondents' physician preference.

In addition to analysis of the experimental treatments, several chi-squared tests were performed in an attempt to see if certain beliefs, attitudes, or experiences were more common to either Blacks or whites. It was determined that Blacks were significantly more likely to believe that racial health disparities exist, to be familiar with and believe the Tuskegee Experiment could occur again, and to be generally more knowledgeable about specific health disparities. However, there was no difference between races found in number of health-related discriminatory experiences or general trust of the healthcare system. The results of these tests are presented in tables 16, 17, 18, 19, 20, and 21 (Appendix B).

Discussion

After viewing the results, there are several conclusions that may be discussed with regard to the results obtained.

Frequency of thoughts of race significantly correlates to healthcare utilization for Blacks, show borderline significant correlation for Hispanics, and show insignificant correlations for Whites.

Frequency of thoughts of race correlated with number of doctor visits for Blacks even when controlling for income, education, insurance status, mental health status, and physical health status. There was, however, only a borderline significant correlation observed in Hispanics and no statistically significant relationship observed for Whites. The lack of a correlation for Whites is not surprising, as being the dominant power in American society, including within the healthcare system, was expected to pardon Whites from any forces, such as discrimination, that racial variables may confer. The lesser statistical significance of the trend observed in Hispanic individuals could be due to several factors. For example, with a shorter history of discrimination in the United States, perhaps Hispanics internalize their race, and therefore act upon it, differently than do minorities with hundreds of years of experience with mistreatment and prejudice, such as that to which Blacks have generally been subjected. This theory may be particularly pertinent to the growing body of literature surrounding the "Hispanic Paradox."

Interestingly, Blacks in the worst health seemed to be most likely to link frequency of thoughts of race with utilization of care, although a statistically insignificant inverse relationship was observed at all levels of health. There could be several explanations for this trend. For example, Blacks that were least likely to see the doctors due to racial identity may have in turn been more likely to suffer from disease due to lack of utilization of proper healthcare. It is also possible that other variables that the model did not take into account may have influenced results.

Hispanic individuals showed a much more sporadic trend than did Whites or Blacks. These results need more exploration with a larger sample size in order to discuss any conclusive results.

Blacks were significantly more likely to prefer a hospital advertisement featuring Black healthcare workers than one featuring White healthcare workers. Whites showed no significant difference in preference.

While there was no correlation between Whites and hospital preference, Blacks were significantly more likely to prefer a hospital featuring Black healthcare professionals. This could be due to a number of moderating variables, such as trust, past discrimination in the healthcare system, knowledge of historical disparities, and black centrality, which were also explored (and are explained below).

This set of results suggests that different social contexts, or the perception of the reality of a context, in which a Black population is placed may actually alter utilization patterns of resources.

Possible moderating variables for Black hospital advertisement preference include knowledge of past mistreatment within the healthcare system, belief in present racial health disparities, trust in the healthcare system, and black centrality.

Questions designed to measure belief in the presence of current racial health disparities, strength of black centrality, and knowledge of the Tuskegee Experiment, specifically if respondents believed such a scenario could occur today, were correlated with Black respondents' choice of hospital advertisement. These results would suggest that Black beliefs and attitudes about these factors might contribute to their decisions about healthcare usage, at least for a portion of the population.

While several possible moderating variables were discovered, other variables hypothesized to moderate Black choice in hospital advertisement showed no significant correlation. For example, there was no significant difference in choice that correlated with knowledge of current disparities or past experiences with discrimination in the healthcare system. Part of the reason these variables might not have shown any significant relationship to Black choice in hospital advertisement may be the relatively small sample size used in this study. Additionally, it is possible that these variables have an effect on use of the healthcare system more generally, but not choice of hospital from an advertisement. For example, a Black individual with the most knowledge of current health disparities may not want to use the healthcare system at all for fear of the manifestation of these disparities in the care delivered, and thus while knowledge of disparities may moderate decisions to utilize healthcare, it would not moderate hospital choice if forced to use the system.

There was no significant correlation for Blacks or Whites in choice of a physician with or without a racialized name.

While race of individuals in hospital advertisements seemed to have some importance to Blacks, there was no correlation for either race in this study with regard to choosing a physician with a racialized or White name. There are a couple of possible explanations for this trend. First, the treatment may have been too subtle to have garnered any sort of response from the survey participants. It is also possible that the fact that there was no correlation observed in this treatment but that there was a correlation in the previous treatment provides insight into what variables are important to Black usage patterns of the healthcare system. For example, Blacks may be more inclined to go to hospitals they view as filled with predominantly Black professionals, or even that is in a visibly Black area, but then not care about the race of the actual physician. This would imply that perhaps Blacks respond to the overarching Whiteness of the healthcare system and health programs rather than the race of the individual physicians. Such an explanation would also help to explain why certain moderating variables that operated on the personal level, such as personal experiences with discrimination, did not moderate a response within either treatment.

Blacks were significantly more likely than Whites to believe racial health disparities exist in the United States, to be aware of the past mistreatment towards Blacks by the medical system, to believe such scenarios could

happen again, and to be generally more knowledgeable about current health disparities.

These conclusions serve to characterize general Black and White group beliefs, attitudes, and experiences with the healthcare system in the United States. Unsurprisingly, Blacks were more likely to believe disparities exist and to be knowledgeable of both past and present disparities. Interestingly, the only question regarding health or healthcare disparities of which Blacks were not significantly more likely to have correct knowledge dealt with prevalence of Sexually Transmitted Diseases (STD) by race. There is strong evidence that the Black population have high rates of diseases such as Syphilis, Gonorrhea, and Chlamydia (Centers for Disease Control and Prevention, 2011). Even incidence rates for cervical cancer, a Human Papillomavirus-associated disease, are higher for Black women than they are for White women (Centers for Disease Control and Prevention, 2012). The fact that Blacks were unaware of these disparities, or possibly did not feel comfortable admitting to having knowledge of them, may have to do with the stigma associated with these types of diseases. In contrast with heart disease and many types of cancer, which are often considered beyond one's control, STDs are often negatively stigmatized to the point of impacting an individual's decision to accurately report sexual behaviors or transmission of disease (Smith, Adler, & Tschann, 1999).

Also noteworthy is the fact that there was not a statistical significance between Black and White trust levels in the healthcare system, nor was there a difference in the likelihood of having had a discriminatory health experiences between the races. Coupled with previous studies that have shown chronic racial discrimination is associated with

poorer health outcomes, this may indicate that discriminatory experiences within the healthcare system itself are not driving Black's poor health outcomes and that level of trust in the healthcare system is not necessarily differ along racial lines, but reactions to distrust may (Williams, Neighbors, & Jackson, 2003). The former point also adds more support to the idea that chronic stress and negative social determinants of health may be driving the poor health outcomes and discrimination, which has already been explored more generally in multiple studies (Mays, Cochran, & Barnes, 2007).

The literature and results suggest several possible policy and programming options that may be used to help alleviate racial health disparities.

Most broadly, results indicate that racial identity does affect healthcare utilization by Blacks but it is not a factor in White usage of health services. This understanding should be used to guide programs and policies, which themselves should be created in a manner that does not put certain racial groups, or subsets of racial groups, in the position of feeling uncomfortable utilizing them. Furthermore, considering the importance that racial identity may have on health utilization and outcomes, more data must be made available on the subject; to start, more than a handful of states should be using the Reaction to Race module in the BRFSS.

More specifically, the significant correlation between Black choice in hospital advertisement suggests that in order to create a healthcare system that is approachable for Black patients, the healthcare system must be taken from the context of a predominately White institution and shifted, both perceptually and in reality, to a diverse context.

Changing the perception of the healthcare system in its social context would work with Black racial group identity, rather than against it, to increase utilization and satisfaction. Thus, Blacks should become not only better represented, but even overrepresented in the advertising campaigns. Furthermore, it should be realized that Blacks do not all have the same strength of racial identity. Certain Blacks are probably more likely than others to have beliefs and attitudes regarding past and possible future mistreatment in the medical system, and solutions should be implemented accordingly to subsets of the Black population. Changing the social context of the healthcare system must be done across a gradient, realizing that the Black population itself is filled with a diverse set of individuals and that advertisement and outreach campaigns may be most effective if done on a micro level. The discovery of the aforementioned moderating variables truly suggests that blanket changes to policies would be inefficient.

This advertising solution, which could be implemented at the hospital level, seems even more proper when it is realized that Whites, who had no significant difference in hospital advertisement choice, do not seem to be swayed by the actors used in such materials, meaning their health decision would most likely not change based on the introduction of a new advertising philosophy. This is not an unknown phenomena, as studies conducted since 1964 concerning White reaction to Black models have indicated that Whites do not necessarily react negatively to Black models, but the focused nature of this survey helps to translate this past work to the healthcare field (Bush, Hair, & Solomon, 1979).

Considering the results of the second treatment, the fact that racialized name had no effect on patient choice of doctor does not indicate that the race of individual

healthcare providers does not matter to patients, nor should it be taken to suggest that efforts to diversify the health workforce are not extremely important. As mentioned earlier, patients reported higher levels of satisfaction when they are treated by doctors of their own race (LaVeist & Nuru-Jeter, 2002). Furthermore, studies have shown that in specific fields, such as pediatrics, without changing recruitment and hiring policies that increase the number of practicing minority doctors, the ratio of physician diversity to patient diversity will actually decrease (Stoddard, Back, & Brotherton, 2000). Thus, while the racialized name of a physician may not influence patients choice of doctor, it is still extremely important to diversify the healthcare workforce or risk the growth of disparities. In order to accomplish the goal of satisfying the greatest number of patients, affirmative action programs at medical schools and residency programs may be looked at to ensure that the patient and physician populations are descriptively similar. This suggestion might seem controversial, especially considering the federal funds used to pay for many components of medical educational programs. However, the Hippocratic Oath read by Cornell's Weill Medical College (2005), which is representative of the oath more generally, specifically states

> "…that I will recognize the limits of my knowledge and pursue lifelong learning to better care for the sick and to prevent illness…That above all else I will serve the highest interests of my patients through the practice of my science and my art…that I will be an advocate for patients in need and strive for justice in the care of the sick"

Knowing that having patients served by doctors of their own race is in the best interest of the patient, which suggests that doctors of different races must acknowledge the limit of

their abilities, it would seem to go against the very oath that doctors swear if such diversification efforts were argued against. Thus, the controversy in affirmative action policy adoption, at least as it relates to the healthcare system and health outcomes specifically, should not stem so much from the proposal of affirmative action programs themselves, but should rather be focused on the lack of willingness to uphold the Hippocratic Oath by propagating the belief that the United States is living in a post-racial society where racial identities and realities have no impact on outcomes.

In addition to the conclusions that can be drawn from the treatments themselves, the differing experiences and beliefs of members of different races, especially Blacks, are also important for policy recommendations. First, judging by their knowledge of health disparities, Blacks seem to be very much aware of their relatively poor outcomes with regard to the healthcare system, and belief in disparities and the possibility of future mistreatment in the medical system suggest that they carry a unique burden. Like knowledge of relatively poor economic outcomes and an understanding of Jim Crow laws, an awareness of a reality characterized by disparity and discrimination may itself be contributing to poorer health outcomes, as even perceived discrimination and perception of relative inequality have been shown to correlate with health outcomes (Marmot, 2005). In this way, not only may economic and educational inequities actually cause poor health, but a knowledge of the relative inequities in the health system itself may form a sort of negative-feedback loop for outcomes. This idea is only hypothetical at this point, but the importance of relative position of any given measure of societal standing on health is a complex concept worth exploring. This is exemplified by the fact that it relative position in society not only negatively effects the health of those who perform relatively poorly,

but also the health of hose who have power and are aware of their own racial privilege (Fujishiro,2009)

It would seem that the only ways to reduce possible health disparities caused by perception of disadvantage in the healthcare system itself would be remove such disadvantages or to convince Blacks that their current fears and knowledge of disadvantage are only adding to their poor health outcomes. With the latter being impractical, programs and policies must be used to address the health disparities themselves. Here the healthcare system and society collide. Discrimination and disadvantage in the economic and educational realms of society can lead to chronic stress and therefore poor health outcomes in Blacks. Thus, to address both the negative feedback loop as well as to improve health outcomes themselves, social factors seem to be the most important variables to be addressed in the fight to reduce disparities. In addition to working to ensure that all races have equal access to health education, which might be achieved through supplemental education by nonprofit groups catering to minority populations, equal pay for equal work, which should be more stringently written into existing anti-discriminatory law, safe locations in which to walk to school or the gym, which may be a function of local city planning and police policies, and healthy dietary options, which can be achieved by private organizations setting up independent markets to supplement existing food choices in poorer parts of cities, it also refers to aforementioned idea of better controlling the social context of the healthcare system. Specifically, diversifying the workforce and utilizing measures, such as diverse casting policies for advertisements, that increase the visibility of the non-White components of the healthcare system, especially in areas where Blacks are most likely to have a high

degree of black centrality, will help to change the image of a system for Whites that is portrayed when looking at the institutions most visible actors – doctors and nurses. When the general social determinants that both directly and indirectly cause poor health outcomes, the social context of healthcare, and the racial diversity of the system are corrected through policy change or the implementation of innovative programs, racial health outcomes will begin to truly equalize.

Limitations

There were several limitations to this study. Namely, the sample of Qualtrics survey respondents was a convenience sample. It is unknown exactly the selection bias that was introduced by using a panel composed solely of registered survey takers, but it may have influenced some results, especially if the factors resulting in the bias were not or could not be controlled by the experimental setup or baseline questions that were asked. Moreover, the sample size was relatively small, which may have affected the significances of some trends reported. Additionally, BRFSS data was only analyzed from five states, and therefore cannot necessarily be generalized to the entire country.

In order to better understand how a social identity approach may be beneficial for informing policy and programming initiatives to reduce racial disparities, future work should include focus groups. In this way, qualitative intricacies not fully explored in this study's setup may be better understood and translated to usable solutions.

Conclusion

Racial group identity and its impacts on the political system have been well explored. Disadvantage and discrimination has led Blacks, who generally cling relatively tightly to their racial identities, to a lack of trust and participation within the system. However, changing descriptive representation in politics as well as alleviating societal disparities has correlated with an increase in percentage of political participation by Blacks in more recent times.

With an understanding that political and health institutions in America may have different roles in society but are comprised of very similar components, it is time to focus the study of the sociological idea of racial group identity to the scope of public health. Its importance has been documented in past works and again in this discussion of Black preference of hospital advertisements and the racialized factors that moderate such a response. Understanding that, like issues with the political system, discrimination and disparity exist in the healthcare system, and that these realities lead Blacks to have unique ways of approaching health institutions in America, policies and programs can be designed to do what the political system has tried. That is, by applying a social identity approach to understand racial health disparities in America, some racial health disparities may be alleviated by fighting for health, economic, and legal solutions that benefit Blacks while also positioning healthcare institutions into a new social context that is not as visibly white.

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Appendix A

Q7 Instructions: Please answer the following questions to the best of your ability. You will not be able to go back to previous questions once you have answered them. Remember that you may choose to stop answering this survey at any point.

Q1 What is your sex?

- ❍ Male (1)
- ❍ Female (2)

Q2 What is your race/ethnicity

- ❍ White (1)
- ❍ Black (2)
- ❍ Hispanic (3)
- ❍ Other (4)

Q3 To the best of your knowledge, what is your income? If you are listed as a dependent of your parent(s), what is their household income?

- ❍ Less than $15K (1)
- ❍ $15 K-$24 K (2)
- ❍ $25 K -$34 K (3)
- ❍ $35 K -$49 K (4)
- ❍ $50 K or more (5)

Q4 What is the highest level of education that you have had?

- ❍ Less than high school (1)
- ❍ Graduated high school (2)
- ❍ Attended/attending some college or technical school (3)
- ❍ Graduated from college or technical school (4)

Q5 What is your age?

- ❍ 18-24 years old (1)
- ❍ 25-34 years old (2)
- ❍ 35-44 years old (3)
- ❍ 45-54 years old (4)
- ❍ 55-64 years old (5)
- ❍ 65 or older (6)

Q54 In which region of the country would you say you live?

- ❍ Northeast (1)
- ❍ Midwest (2)
- ❍ South (3)
- ❍ West (4)
- ❍ Unknown (5)

Q12 Please observe the following hypothetical advertisements for two hospitals. The following three questions will refer to these hypothetical advertisements. If you had to choose, which of these hospitals appeals to you the most?

- ❍ Hospital 1 (above) Honor Roll Hospital by US News and World Report Ranked in 12 specialties Over 450 hospital beds 10 MRI Machines and 15 X-ray Machines

  _____ (1)
- ❍ Hospital 2 (above) Honor Roll Hospital by US News and World Report Ranked in 14 specialties Over 400 hospital beds 12 MRI Machines and 15 X-ray Machines

  _____ (2)

Q51 Please observe the following hypothetical advertisements for two hospitals. The following three questions will refer to these hypothetical advertisements. If you had to choose, which of these hospitals appeals to you the most?

- ❍ Hospital 1 (above) Honor Roll Hospital by US News and World Report Ranked in 12 specialties Over 450 hospital beds 10 MRI Machines and 15 X-ray Machines

  _____ (1)
- ❍ Hospital 2 (above) Honor Roll Hospital by US News and World Report Ranked in 14 specialties Over 400 hospital beds 12 MRI Machines and 15 X-ray Machines

  _____ (2)

Q13 Did one of the preceding advertisement appeal to you especially strongly?

- ❍ Niether of them are appealing (1)
- ❍ Hospital 1 (2)
- ❍ Hospital 2 (3)
- ❍ All of them appeal equally (4)

Q14 Is there any hospital that you would rather not attend (choose all that apply)?

- ❑ I would feel completely comfortable attending all of the hospitals (1)
- ❑ Hospital 1 (2)
- ❑ Hospital 2 (3)
- ❑ I would rather not attend any of these hospitals (4)

Q52 Imagine that during the summer you are responsible for cutting the grass in your yard. You notice over several weeks that after completing your chore, you are becoming increasingly fatigued. Furthermore, you are beginning to have chest pain and are short of breath while mowing your lawn. You decide to visit a doctor to learn more about your symptoms. Assuming each physician will charge the same amount per visit and and you must choose one of the two, which of the following two doctors would you feel more comfortable visiting?

- Connor Lavins Resume Undergraduate School: Princeton University (Summa Cum Laude) Medical School: Yale Medical School Specialty: Cardiologist (11 Years Experience) Other Professional: Over 50 Publications, Outstanding Clinician Award, Member of the American Public Health Association Other Personal: Coaches in youth baseball league, marathon runner (1)
- Alexander Smith Resume Undergraduate School: Harvard University Medical School: Harvard Medical School Specialty: Interventional Cardiologist (11 Years Experience) Other Professional: Hospital Residency Director, Outstanding Clinician Award, Member of the American Heart Association Other Personal: Volunteers at the local food bank, coaches the local high school's Science Olympiad team (2)

Q53 Imagine that during the summer you are responsible for cutting the grass in your yard. You notice over several weeks that after completing your chore, you are becoming increasingly fatigued. Furthermore, you are beginning to have chest pain and are short of breath while mowing your lawn. You decide to visit a doctor to learn more about your symptoms. Assuming each physician will charge the same amount per visit and and you must choose one of the two, which of the following two doctors would you feel more comfortable visiting?

- Connor Lavins Resume Undergraduate School: Princeton University (Summa Cum Laude) Medical School: Yale Medical School Specialty: Cardiologist (11 Years Experience) Other Professional: Over 50 Publications, Outstanding Clinician Award, Member of the American Public Health Association Other Personal: Coaches in youth baseball league, marathon runner (1)
- DeShawn Smith Resume Undergraduate School: Harvard University Medical School: Harvard Medical School Specialty: Interventional Cardiologist (11 Years Experience) Other Professional: Hospital Residency Director, Outstanding Clinician Award, Member of the American Heart Association Other Personal: Volunteers at the local food bank, coaches the local high school's Science Olympiad team (2)

Q15 Instructions: Please answer the following questions to the best of your ability. You will not be able to go back to previous questions once you have answered them.

Q16 What do you think is the percentage of black doctors in the U.S.?

- 1.0% (1)
- 3.5% (2)
- 9.6% (3)
- 14.2% (4)
- I do not know (5)

Q17 If you had to say, what do you think is the percentage of black doctors in the U.S.?

- 1.0% (1)
- 3.5% (2)
- 9.6% (3)
- 14.2% (4)

Q18 Do you think blacks are more or less likely than whites to have Sexually Transmitted Diseases (STD's)?

- Blacks are more likely (1)
- Blacks are less likely (2)
- Blacks and whites are equally as likely (3)
- I do not know (4)

Q19 If you had to say, do you think blacks are more or less likely than whites to have Sexually Transmitted Diseases (STD's)?

- Blacks are more likely (1)
- Blacks are less likely (2)
- Blacks and whites are equally as likely (3)

Q20 Do you think that blacks have higher or lower death rates due to heart disease than do whites?

- ❍ Blacks have higher death rates (1)
- ❍ Blacks have lower death rates (2)
- ❍ Black and white death rates are equal (3)
- ❍ I do not know (4)

Q21 If you had to say, do you think that blacks have higher or lower death rates due to heart disease than do whites?

- ❍ Blacks have higher death rates (1)
- ❍ Blacks have lower death rates (2)
- ❍ Black and white death rates are equal (3)

Q24 Do you think blacks are more or less likely than whites to have health insurance?

- ❍ Blacks are more likely (1)
- ❍ Blacks are less likely (2)
- ❍ Blacks and whites are equally as likely (3)
- ❍ I do not know (4)

Q25 If you had to say, do you think blacks are more or less likely than whites to have health insurance?

- ❍ Blacks are more likely (1)
- ❍ Blacks are less likely (2)
- ❍ Blacks and whites are equally as likely (3)

Q26 Do you believe that major racial health disparities exist in the United States?

- ❍ Yes (1)
- ❍ No (2)

Q27 Who commissioned the Tuskegee Study?

- U.S. Public Health Service (1)
- Tuskegee Institute (2)
- Howard University (3)
- I am aware of the Tuskegee Study, but I do not know who commissioned it (4)
- I am not aware of what the Tuskegee Study is (5)

Q28 In the Tuskegee Study, did researchers give the participants syphilis?

- Yes, they gave syphilis to study participants (1)
- No, study participants already had syphilis (2)
- I am aware of the Tuskegee Study, but I do not know if participants already had syphilis or not (3)
- I am not aware of what the Tuskegee Study is (4)

Q29 Who were the primary study participants in the Tuskegee Study

- White males (1)
- Black males (2)
- White females (3)
- Black females (4)
- Males of all races (5)
- Females of all races (6)
- Males and females of all races (7)
- I am aware of the Tuskegee Study, but I do not know if participants already had syphilis or not (8)
- I am not aware of what the Tuskegee Study is (9)

Q30 Do you think it is possible for a study like the Tuskegee Study to occur in the U.S. today?

- Yes (1)
- No (2)
- I am not aware of what the Tuskegee Study is (3)

Q33 Instructions: The following questions ask for your opinions and about your experiences. Please answer the following questions to the best of your ability. You will not be able to go back to previous questions once you have answered them.

Q31 Patients have sometimes been deceived or mislead by healthcare organizations

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Agree (3)
- ❍ Strongly Agree (4)

Q32 Healthcare organizations often want to know more about your business than they need to know

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Agree (3)
- ❍ Strongly Agree (4)

Q34 Healthcare organizations put the patient's health first

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Agree (3)
- ❍ Strongly Agree (4)

Q35 Patients should always follow the advice given to them at healthcare organizations (ie. doctor's office, etc)

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Agree (3)
- ❍ Strongly Agree (4)

Q36 Workers at healthcare organizations know what they are doing

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Agree (3)
- ❍ Strongly Agree (4)

Q37 Have you ever had a healthcare experience where you felt you were harmed or discriminated against?

- ❍ Yes (1)
- ❍ No (2)

Q38 Were you physically harmed or discriminated against?

- ❑ Physically harmed (1)
- ❑ Discriminated against (2)

Q39 Are you aware of anybody in your family having a healthcare experience where they felt they were harmed or discriminated against?

- ❍ Yes (1)
- ❍ No (2)

Q40 Were they physically harmed or discriminated against?

- ❑ Physically harmed (1)
- ❑ Discriminated against (2)

Q41 Overall, being Black has very little to do with how I feel about myself

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)
- ❍ Not Black (8)

Q43 In general, being Black is an important part of my self-image, accomplishments, and advancements

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)
- ❍ Not Black (8)

Q44 My destiny is tied to the destiny of other Black people

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)
- ❍ Not Black (8)

Q45 Being Black is unimportant to my sense of what kind of person I am

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)
- ❍ Not Black (8)

Q46 I have a strong sense of belonging to Black people

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)
- ❍ Not Black (8)

Q47 I have a strong attachment to other Black people

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)
- ❍ Not Black (8)

Q48 Being Black is an important reflection of who I am

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)
- ❍ Not Black (8)

Q49 Being Black is not a major factor in my social relationships

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)
- ❍ Not Black (8)

Appendix B

Table 1.
Selected Health Outcomes By Race

Outcome	White	Black	Hispanic
Infant Mortality Rate (deaths/1,000 live births)	5.7	13.4	5.5
Life Expectancy (years)	78.1	72.9	80.6
Amenable Mortality (deaths/100,000)	86	183	NR

Sources: National Vital Statistics Reports and 8th National Summit on Health Disparities

Table 2.
Insurance Status and Race

	Race/ethnicity		
	Hispanic or Latino	**White, single race**	**Black, single race**
Uninsured at time of	28.9%	10.6%	16.4%
Uninsured for at least part of the last year	33.3%	14.2%	21.4%
Uninsured for more than the past year	23.6%	7.5%	11.5%

Source: National Health Interview Survey, Early Release

Table 3
State Breakdown

State	N	Percentage of Sample	Cumulative Percent
Arkansas	20305	15.9	15.9
Colorado	2987	23.2	39.1
Delaware	1166	15.8	54.9
South Carolina	20305	27.6	82.5
Wisonsin	2987	17.5	100
Total	25750	100	

Table 4
Racial Breakdown

Race	N	Percentage of Sample	Cumulative Percent
White	20305	83	83
Black	2987	12.2	95.2
Hispanic	1166	4.8	100
Total	24458	100	

Table 5.1
Model 1: Frequency of Thoughts of Race vs. Number of Doctors Visits

Race	β Coefficients	95.0% Confidence Interval		Significance
		Lower Bound	Upper Bound	
White	-0.01	-0.09	0.04	0.4
Black	-0.12	-0.21	-0.04	0.004**
Hispanic	-0.12	-0.29	0.00	0.05

Model controls for income, level of education obtained, health insurance status, and mental health status
**Two-tailed test indicates significant at P<.01

Table 5.2
Model 2: Frequency of Thoughts of Race vs. Number of Doctors Visits

Race	β Coefficients	95.0% Confidence Interval		Significance
		Lower Bound	Upper Bound	
White	-0.003	-0.66	0.55	0.865
Black	-0.08	-0.178	-0.006	0.037*
Hispanic	-0.11	-0.267	0.01	0.068

Model controls for income, level of education obtained, health insurance status, and general health status
*Two-tailed test indicates significance at P<.05

Table 6
Frequency of Thoughts of Race and Mental Health vs. Number of Doctor Visits

Race	Days of Reported Poor Mental Health	β Coefficients	Significance
White	0	-0.03	0.101
	1-7	0.04	0.119
	8-31	-0.03	0.213
Black	0	-0.09	0.06
	1-7	-0.13	0.072
	8-31	-0.14	0.042*
Hispanic	0	-0.21	0.006**
	1-7	-0.07	0.291
	8-31	0.01	0.474

Model controls for income, level of education obtained, and health insurance
*One-tailed test indicates significance at P<.05
**One-tailed test indicates significance at P<.01

Table 7
Frequency of Thoughts of Race and Health Status vs. Number of Doctor Visits

Race	Self- Reported Health Status	β Coefficients	Significance
White	Excellent/Very Good	0.003	0.900
	Good/Fair	0.000	0.984
	Poor	-0.024	0.697
Black	Excellent/Very Good	-0.047	0.503
	Good/Fair	-0.085	0.119
	Poor	-0.467	0.009**
Hispanic	Excellent/Very Good	0.033	0.737
	Good/Fair	-0.193	0.019*
	Poor	0.129	0.621

Models controls for income, level of education obtained, and health insurance status
*One-tailed test indicates significance at P<.05
**One-tailed test indicates significance at P<.01

Table 8
Treatment 1 Results

	N	$\bar{x}$	$\bar{x}$ Scenario 1 - $\bar{x}$ Scenario 2
Scenario 1	146	1.68	
Scenario 2	154	1.57	
Difference			0.11*

*Two-tailed test indicates significance at P<.05

Table 9
Treatment 1 Results By Race

	Condition 1		Condition 2		
Race	**N**	$\bar{x}$	**N**	$\bar{x}$	$\bar{x}$ Condition 1 - $\bar{x}$ Condition 2
Black	103	1.75	122	1.56	0.19**
White	43	1.53	32	1.63	-0.10

**Two-tailed test indicates significance at P<.01

Table 9.1
Treatment 1 Regression Results By Race

Race	β Coefficients	95.0% Confidence Interval		Significance
		Lower Bound	Upper Bound	
White	-0.089	-0.329	0.150	0.458
Black	0.204	0.071	0.320	0.002**
Combined	0.119	0.005	0.225	0.04*

Model controls for sex, age, income, education, and region of residence
*Two-tailed test indicates significance at P<.05
**Two-tailed test indicates significance at P<.01

Table 11
Treatment 1 Results By Measure of Black Centrality

	Condition 1		Condition 2			
	N	$\bar{x}$	N	$\bar{x}$	$\bar{x}$ Condition 1 - $\bar{x}$ Condition 2	95% CI
Highest 50th ercentile of Black Centrality	58	1.71	60	1.47	0.240**	(0.064, 0.416)
Lowest 50th ercentile of Black Centrality	45	1.80	60	1.65	0.150	(-.026, 0.326)

**Two-tailed test indicates significance at P<.01

Table 12
Treatment 1 Results In Blacks+ and Knowledge of the Tuskegee Experiment

	Condition 1		Condition 2			
	N	$\bar{x}$	N	$\bar{x}$	$\bar{x}$ Condition 1 - $\bar{x}$ Condition 2	95% CI
Believe Tuskegee Experiment Could Happen Again	50	1.73	51	1.53	0.211*	(0.023, 0.398)
Believe Tuskegee Experiment Could Not Happen Again	23	1.70	32	1.66	0.04	(-0.222, 0.301)

Respondents indicated they believed they had knowledge of the Tuskegee Syphilis experiment prior to answering this question.
+There was no statistically significant trend observed in Whites
*Two-tailed test indicates significance at P<.05

Table 13
Treatment 1 Results When Believing That Racial Disparities Exist in Healthcare

	Condition 1		Condition 2		
Race	**N**	**$\bar{x}$**	**N**	**$\bar{x}$**	**$\bar{x}$ Condition 1 - $\bar{x}$ Condition 2**
Black	91	1.75	108	1.56	0.19**
White	24	1.61	18	1.58	0.03

**Two-tailed test indicates significance at P<.01

Table 14
Treatment 1 Results By Trust in the Healthcare System

		Condition 1		Condition 2			
ace	**Trust in Healthcare**	**N**	**$\bar{x}$**	**N**	**$\bar{x}$**	**$\bar{x}$ Condition 1 - $\bar{x}$ Condition 2**	**95% CI**
lack	Highest 50th percentile of trust	66	1.7	86	1.55	0.15	(-.006, .307)
	Lowest 50th percentile of trust	37	1.84	36	1.58	0.255*	(0.049, 0.460)
Vhite	Highest 50th percentile of trust	29	1.52	23	1.65	-0.165	(-0.415, 0.145)
	Lowest 50th percentile of trust	14	1.57	9	1.56	0.016	(-0.455, 0.477)

*Two-tailed test indicates significance at P<.05

Table 15
Treatment 2 Results By Race

	Condition 1		Condition 2		
Race	**N**	$\bar{x}$	**N**	$\bar{x}$	$\bar{x}$ **Condition 1 - $\bar{x}$ Condition 2**
Black	112	1.69	113	1.71	-0.02
White	43	1.43	32	1.55	-0.12

Table 16
Belief That Racial Health Disparities Exist By Race

		Race		Total
		White	*Black*	
Believe Racial Health Disparities Exist	*Yes*	42	199	**241**
	No	33	26	**59**
Total		**75**	**225**	**300**

$\chi 2 = 37.478$, P<.001

Table 17
Discriminatory Health Experience By Race

		Race		Total
		White	*Black*	
Had healthcare experiences in which you were discriminated against	*Yes*	18	72	**90**
	No	57	153	**210**
Total		**75**	**225**	**300**

$\chi 2 = 1.714$, P=0.190

Table 18
Belief that Tuskegee Experiment Could Occur Again By Race

		Race		Total
		White	*Black*	
Do you believe a study like the Tuskegee Experiment could happen today	*Yes*	11	101	**112**
	No	17	55	**72**
Total		**28**	**156**	**300**

All respondents claimed to have knowledge of what the Tuskegee Experiment entailed
$\chi 2 = 6.459$, $P<.05$

Table 19
Familiarity With Tuskegee Experiment By Race

		Race		Total
		White	*Black*	
When first asked about it, participant believes he or she is aware of what the Tuskegee Study is	*Yes*	33	170	**203**
	No	42	55	**97**
Total		**75**	**225**	**300**

$\chi 2 = 25.601$, $P<.001$

Table 20
Healthcare Workers Trust by Race

		Race		Total
		White	*Black*	
Do you believe healthcare workers generally know what they are doing?	*Yes*	55	176	**231**
	No	20	49	**69**
Total		**75**	**225**	**300**

$\chi 2 = 0.759$, P=0.384

Table 21
Patient Trust of Healthcare Organizations by Race

		Race		Total
		White	*Black*	
Do you believe patients have sometimes been mislead or deceived by health organizations?	*Yes*	12	33	**45**
	No	63	192	**255**
Total		**75**	**225**	**300**

$\chi 2 = 0.078$, P=0.779

Table 22
Correct Knowledge of Current Disparites

Question	Correlation	Significance
What is the percentage of Black doctors in the US	0.147	0.012*
Are Blacks more or less likely to have STDs than Whites are?	-0.800	0.168
Do Blacks have higher or lower mortality rates due to heart disease than do Whites?	0.118	0.043*
Are Blacks more or less likely than White to have health insurance?	0.26	<.001***

Note that positive value indicates correlation with higher number of correct answers by Black respondents while negative value indicates correlation with higher number of correct answers by White respondents
*Two-tailed test indicates significance at P<.05
***Two-tailed test indicates significance at P<.001